

## TEGO – Power for Solventborne High Solids Coatings



**tego**<sup>®</sup>



#### **Masthead**

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## About us

TEGO – one of Evonik's leading brands.

As the leading supplier of specialty chemicals worldwide, Evonik offers its customers in the coatings and printing inks industry a unique range of products under the TEGO brand name. Our portfolio is the result of experience gained over 30 years in which we have researched and developed optimal solutions together with, and for our customers. With over 200 products, the range currently includes not only defoamers and deaerators but also wetting and dispersing additives, leveling additives, radiation-curing additives, substrate wetting additives, rheological additives, hydrophobing agents and even co-binders, specialty binders and nanoresins.

We get rid of air from paints, make surfaces glossy and ensure lacquers are scratch-resistant. Environmental concerns are always of key importance when developing new products.

Besides our extensive expertise in providing tailor-made solutions, our numerous contacts in more than 40 countries are an additional advantage. This underlines our philosophy of developing intelligent products for new applications not only for, but together with customers. We look forward to your challenge and are confident that we can find an advantageous solution for you.

**TEGO – Adding Advantages.**



## Pigment wetting and stabilization

Wetting and dispersing additives wet and stabilize the most diverse pigments. An effective reduction in viscosity with tailor-made additives is the prerequisite for the manufacture of low VOC formulations. At the same time maximum color intensity is achieved through optimum pigment wetting.

The use of TEGO® Dispers products also enables costs to be reduced. As a result of the low viscosity, pigment loading can be significantly increased and a greater amount of pigment can be dispersed in each milling cycle. Therefore, production time and energy consumption can be minimized.

### Wetting and dispersing additives for pigment wetting and stabilization in the direct grind

Paint system	Inorganic	Organic
2-pack Epoxy	TEGO® Dispers 652 TEGO® Dispers 628 TEGO® Dispers 670	TEGO® Dispers 670 TEGO® Dispers 628 TEGO® Dispers 672
2-pack PU	TEGO® Dispers 670 TEGO® Dispers 656 TEGO® Dispers 628	TEGO® Dispers 670 TEGO® Dispers 685 TEGO® Dispers 650
Other binders	TEGO® Dispers 656 TEGO® Dispers 628 TEGO® Dispers 710	TEGO® Dispers 650 TEGO® Dispers 670 TEGO® Dispers 710
Pigment concentrates	TEGO® Dispers 670 TEGO® Dispers 628 TEGO® Dispers 656	TEGO® Dispers 670 TEGO® Dispers 685 TEGO® Dispers 671





## Defoaming and Deaerating

Increasing the solids content at working consistency and the limited choice of solvents significantly affect the air release from high solids coatings. Consequently, they are frequently prone to pinholing. Clear coats, in particular, demand the use of highly efficient and compatible deaerators.

Effective deaerating combined with good compatibility can be achieved with tailor-made deaerators.

### Defoamers/Deaerators for high solids coatings

Paint system	Clear	Pigmented
Alkyd	TEGO® Airex 931 TEGO® Flow 370 <sup>1</sup> TEGO® Flow ZFS 460 <sup>1</sup>	TEGO® Airex 940 TEGO® Airex 944 TEGO® Foamex N
2-pack PU	TEGO® Airex 945 TEGO® Airex 990 TEGO® Flow 370 <sup>1</sup>	TEGO® Airex 944 TEGO® Airex 990 TEGO® Foamex N
2-pack PU polyaspartics	TEGO® Airex 990 TEGO® Foamex K 7 <sup>1*</sup> TEGO® Airex 962	TEGO® Airex 944 TEGO® Airex 962 TEGO® Airex 990
Polyester/melamine	TEGO® Airex 931 TEGO® Airex 962 TEGO® Flow 370 <sup>1</sup>	TEGO® Airex 990 TEGO® Airex 931 TEGO® Airex 936
2-pack Epoxy	TEGO® Airex 910 TEGO® Airex 900 TEGO® Airex 922	TEGO® Airex 940 TEGO® Airex 944 TEGO® Airex 991

<sup>1</sup> silicone-free \* not available in the US

## Slip and flow additives

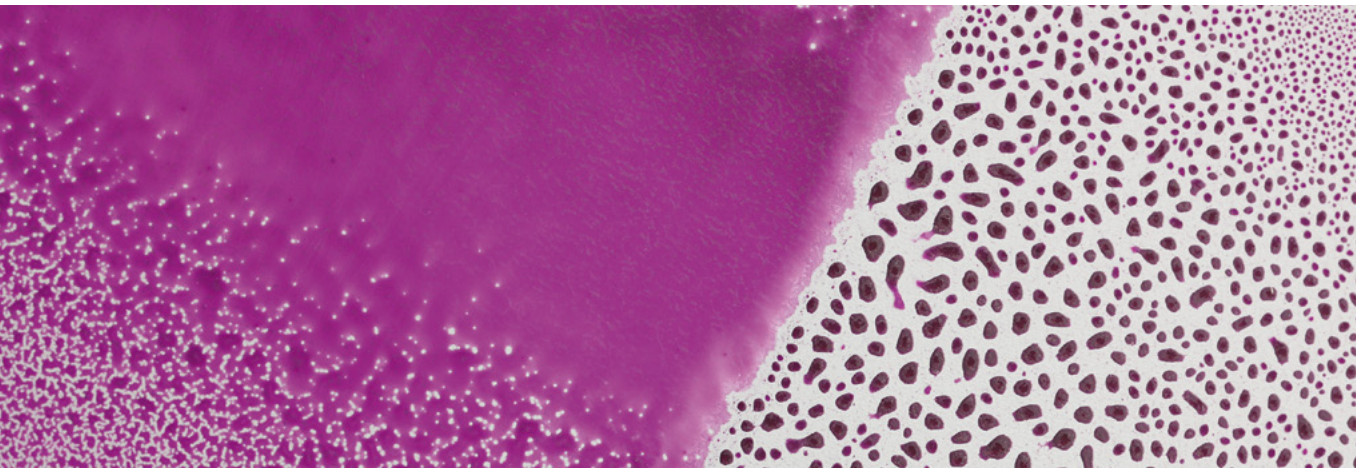
Inadequate flow is a frequently observed weakness of high solids coatings. There is a tendency to use low molecular weight binders to achieve a low coating viscosity. The choice of solvent, which also has a major influence on flow, is limited by regulatory constraints.

Depending on siloxane content and molecular weight, our additives promote the slip and flow/leveling characteristics of the finish and also effectively prevent cratering and foam formation.

### Slip and flow additives for high solids coatings

Paint system	Clear	Pigmented
Alkyd	TEGO® Glide 450 TEGO® Glide B 1484 TEGO® Flow 370 <sup>1</sup>	TEGO® Glide 100 TEGO® Glide A 115 TEGO® Flow ZFS 460
2-pack PU	TEGO® Flow 425 TEGO® Glide 415 <sup>*</sup> TEGO® Flow 370 <sup>1</sup>	TEGO® Glide 415 <sup>*</sup> TEGO® Glide 100 TEGO® Flow ZFS 460
2-pack PU polyaspartics	TEGO® Glide 411 <sup>*</sup> TEGO® Glide 415 <sup>*</sup> TEGO® Wet 505 <sup>1</sup>	TEGO® Glide B 1484 TEGO® Glide A 115 TEGO® Wet 505 <sup>1</sup>
Polyester/melamine	TEGO® Flow 425 TEGO® Glide 100 TEGO® Flow 300 <sup>1</sup>	TEGO® Glide 100 TEGO® Flow ZFS 460 TEGO® Glide 415 <sup>*</sup>
2-pack Epoxy	TEGO® Flow 370 TEGO® Glide 450 TEGO® Glide 406	TEGO® Glide 450 TEGO® Glide B 1484 TEGO® Flow ZFS 460

<sup>1</sup> silicone-free \* not available in the US



## Substrate wetting and anti-crater effect

Optimal substrate wetting is a prerequisite for defect-free finishes. Differences in surface tension, caused for example by contaminants, prevent the formation of a continuous film. This can result in cratering.

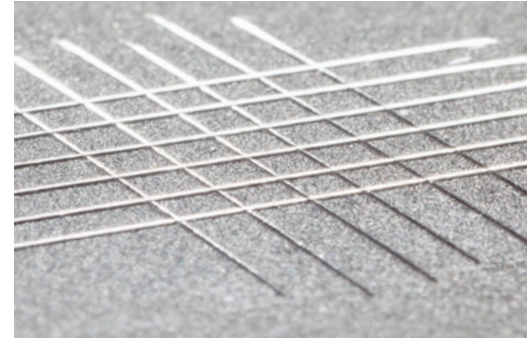
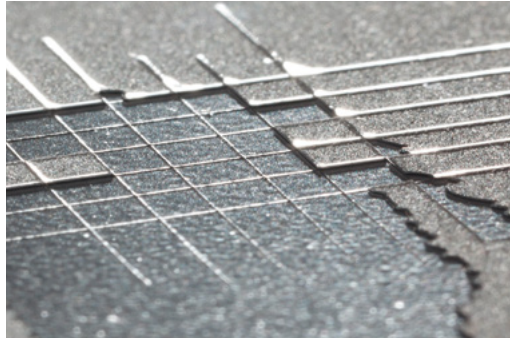
Depending on siloxane content and molecular weight, our additives promote block resistance and slip and prevent cratering (see also Slip and Flow Additives).

The molecular weight and, where necessary, the siloxane content of products in the TEGO® Wet range are chosen to ensure that coatings remain easily recoatable.

### Anti-crater additives for high solids coatings

Paint system	Clear	Pigmented
Alkyd	TEGO® Glide 450 TEGO® Glide 100 TEGO® Wet 270	TEGO® Glide 450 TEGO® Glide 100 TEGO® Glide 110
2-pack PU	TEGO® Wet 280 TEGO® Wet 270 TEGO® Flow 425	TEGO® Wet 280 TEGO® Wet 270 TEGO® Flow ATF 2
2-pack PU polyaspartics	TEGO® Wet 260* TEGO® Wet KL 245 TEGO® Wet 505 <sup>1</sup>	TEGO® Wet 270 TEGO® Twin 4000 TEGO® Wet 260*
Polyester/melamine	TEGO® Glide 415* TEGO® Wet 270 TEGO® Flow 425	TEGO® Glide 415* TEGO® Wet 270 TEGO® Flow 425
2-pack Epoxy	TEGO® Wet 270 TEGO® Glide 450 TEGO® Glide 410	TEGO® Wet 270 TEGO® Glide 450 TEGO® Glide 410

<sup>1</sup> silicone-free \* not available in the US



## Co-Binders

The fundamental properties of a coating are decisively influenced by the choice of the main binder. However, it is not always possible to achieve the required properties in this manner.

TEGO co-binders positively influence properties such as hardness or flexibility, gloss, touch-drying speed and viscosity and, in particular, improve adhesion to diverse substrates such as plastics and metals.

### Co-binders for high solids coatings

Product	Active substance	Improved adhesion particularly on	Particular feature
TEGO® VariPlus AP	100%	Metals	Increases gloss
TEGO® VariPlus SK	100%	Metals and plastics	Increases hardness and gloss
TEGO® AddBond LTH	100%	Metals	Increases hardness
TEGO® AddBond LTW/LTW-B	60% in xylene or butyl acetate	Metals and plastics	Increases elasticity
TEGO® AddBond HS	75% in butyl acetate	Metals and plastics	Increases elasticity

## Specialty Binders

The 100% liquid silicone-epoxy hybrid SILIKOPON® EF is a main binder for demanding exterior applications. The use of SILIKOPON® EF in formulations achieves effective corrosion protection, high gloss and good stability to UV radiation.



### Specialty binders for high solids coatings

Product	Active substance	Application	Particular feature
SILIKOPON® EF	100%	heavy duty corrosion protection, good resistance to weathering and chemicals	good anti-graffiti effect

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